



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 5  
77 WEST JACKSON BOULEVARD  
CHICAGO, IL 60604-3590




REPLY TO THE ATTENTION OF:

**MEMORANDUM**

SUBJECT: **ACTION MEMORANDUM** - Request for Approval of a Time-Critical Removal Action at the Former U.S. Scrap Site, Chicago, Cook County, Illinois (Site ID #05Z8)

FROM: Craig Thomas, On-Scene Coordinator  
Emergency Response Branch 2 - Section 2

TO: Richard C. Karl, Director  
Superfund Division

THRU: Linda M. Nachowicz, Chief   
Emergency Response Branch 2, Superfund Division

I. **PURPOSE**

The purpose of this memorandum is to document your approval to expend up to \$1,999,564 to mitigate threats to public health, welfare, and the environment at the former U.S. Scrap Site, hereafter referred to as the "Site", in Chicago, Cook County, Illinois. The proposed removal action is necessary to mitigate the immediate threat to human health and the environment posed by the presence of polychlorinated biphenyls (PCBs), chlorinated solvents, lead and cadmium in soils and surface water at the Site.

The proposed removal action at the Site is a time-critical removal due to on-going trespasser issues, and the potential for contaminants in surface impoundments and soils to migrate off-site. Potential impacts should be eliminated before human health risks to the neighboring workers become an issue.

The removal action proposed herein will address imminent threats to public health, welfare, and the environment posed by the Site through the following actions: installation of sheet piling between U.S. Scrap and the adjacent Metropolitan Water Reclamation District of Greater Chicago property; installation of interceptor trenches to remove liquid wastes pooled at or near the surface, and pumping of same; excavation and disposal (in some instances including incineration of) PCB-contaminated soils which exhibit characteristics of hazardous waste, as defined in 40 Code of Federal Regulations (CFR) 261.24; surveying for reported buried drums using geophysical techniques, as well as overpacking and disposal of any drums discovered from this survey.

The above actions will require an estimated 70 working days to complete.

There are no nationally significant or precedent-setting issues associated with the Site and the Site is not currently on the National Priorities List (NPL).

## **II. SITE CONDITIONS AND BACKGROUND**

CERCLIS ID # ILD980679484

### **A. Physical Location and Description**

The Site is located at 12301 South Park Avenue near 123<sup>rd</sup> Street and Cottage Grove Avenue in Chicago, Cook County, Illinois, 53208, (approximately -87° 36'39" latitude, 41° 40'30" longitude), Cook County, Illinois.

The Site is an abandoned debarrelling facility that operated as an open dump in the late 1960's and early 1970's. It occupies approximately 6 ½ acres and is bordered by a railroad right-of-way to the west, the Metropolitan Water Reclamation District's Calumet Sewage Treatment Plant to the South and East, and S.G. Keywell, Inc., a scrap metal recycling operation to the North. The Site is located approximately 1 mile west of Lake Calumet and ½ mile northeast of the Little Calumet River. The Site is also located within one mile of residential housing.

According to the Region 5 Superfund Environmental Justice Analysis in Illinois, the average low income percentage is 27% and the average minority percentage is 32% or greater. To meet the environmental justice (EJ) concern criteria, the area within 1 mile of the U.S. Scrap Site must have a population that is twice the state low income percentage and/or twice the state minority percentage. That is, the area must be at least 54% low income and/or 64% minority. There are approximately 6,338 people who live within one mile of the Site. At the U.S. Scrap Site, the low income percentage is 54% and the minority percentage is 99% as determined by the Landview III EJ analysis (Attachment 3). Therefore, this Site does meet the Region's EJ criteria based upon demographics as identified in "Region 5 Interim Guidelines for Identifying and Addressing a Potential EJ Case, June 1998.

### **B. Site Background**

From the late 1960's to 1975, Mr. Steve Martell conducted drum reclamation activities at the U.S. Scrap Site. Non-reclaimable drums and wastes from re-claimable drums were emptied into on-site pits. Waste received at U.S. Scrap for on-site incineration was allegedly dumped at the Site.

During its period of operation as a waste disposal facility, the Site was inspected by the City of Chicago's Environmental Control Division as well as the Metropolitan Sanitary Sewer District of Greater Chicago (MSD), which is now known as the Metropolitan Water Reclamation District of Greater Chicago (MWRD). The MSD's concern over runoff from the U.S. Scrap Site entering into adjacent MSD property resulted in a cooperative agreement between the Illinois Attorney General, the Illinois Environmental Protection Agency (Illinois EPA), the City of Chicago, and Mr. Steve Martell.

The Illinois EPA inspected the Site in 1980, finding approximately 400 55-gallon drums of waste scattered on the surface of the site, liquid wastes stored in the eight concrete silos, scattered surficial deposits of waste, several lagoons of waste, and sludge in on-site drainage swales. The State sued the operator, Steve Martell, citing him for illegal open dumping and refuse disposal without a permit. In September of 1980, Mr. Martell removed the surface drums, the liquids within the silos and approximately 10,000 gallons of sludge from the drainage swales. The Site received a Hazard Ranking System (HRS) score of 1.92 in 1982; and was not listed on the National Priorities List (NPL). U.S. EPA conducted a removal action in 1985, extinguishing a landfill fire by capping the affected areas with clay, and excavating and backfilling a railroad embankment, in an attempt to locate shock-sensitive chemicals. Sixty cubic yards of crushed drums and debris, one 55-gallon drum of flammable solids, one 55-gallon drum of PCBs, three 55-gallon drums of cyanide waste, 76 55-gallon drums of organic compounds, and over 120 cubic yards of contaminated soil were removed from the excavation areas. A special study conducted in 1987 revealed that elevated levels of many hazardous substances remained, including PCBs, pesticides, and organic solvents. On July 25, 1989, U.S. EPA filed an action against potentially responsible parties for injunctive relief, penalties and reimbursement of costs. Fourteen customers of U.S. Scrap, Inc. agreed to reimburse U.S. EPA for the costs of the removal under a partial consent decree entered on March 23, 1992. The Northern District of Illinois retains jurisdiction over that Consent Decree.

By correspondence dated June 28, 2005, Illinois EPA asked U.S. EPA to conduct a time-critical removal assessment and possible removal action at the Site. The June 28, 2005 correspondence stated that Illinois EPA collected soil, sediment and water samples for the Site in 2004, and found that the Site still contains high levels of pesticide and semi-volatile contamination. The attached sample results indicated elevated levels of chlordane, p,p'-DDD, DDT, xylene, phenol, 2-methylphenol, 4-methylphenol, acetophenone, 2,4 Dimethylphenol, naphthalene, 2-methylnaphthalene, phenanthrene, anthracene, Di-n-butylphthalate, fluoranthene, pyrene, benzo(a)anthracene, chrysene, Bis(2-ethylhexyl)phthalate 310, Di-n-octylphthalate, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, dibenzo(a,h)anthracene, benzo(ghi)perylene and other hazardous substances.

On November 24, 2006, MWRD employees observed oily product in trenches adjacent to the Site. MWRD is re-lining their sludge drying beds and installing associated utilities. They contacted U.S. EPA regarding this matter. Subsequently, MWRD conducted their own investigation of the material entering their trenches. Analytical results showed VOCS, SVOCS, PCBs and Arsenic.

Due to the inability to establish a clear owner of the property, U.S. EPA, in conjunction with the U.S. Attorney's Office, obtained a warrant for access to conduct a site assessment at the property. U.S. EPA's Site Assessment, which occurred June 25, 2007, determined that Site soils were heavily contaminated with PCBs, chlorinated solvents, lead and cadmium.

Surface liquids sampled during U.S. EPA's Site Assessment showed vinyl chloride as high as 650 ppb, benzene as high as 780,000 ppb, ethylbenzene as high as 14,000,000 ppb, 4-methyl-2-pentanone as high as 1,800,000 ppb, toluene as high as 26,000,000 ppb, total xylenes as high as 84,000,000 ppb, bis (2-ethylhexyl)phthalate as high as 2,800,000 ppb, 1,2-dichlorobenzene as high as 32,000 ppb, diethyl phthalate as high as 7,600 ppb, di-n-butylphthalate as high as 160,000 ppb, 2-methylnaphthalene as high as 1,100,000 ppb, acenaphthene as high as 8,900 ppb, acenaphthylene as high as 10,000 ppb, anthracene as high as 61,000 ppb, benz(a)anthracene as high as 52,000 ppb, benzo(a) pyrene as high as 11,000 ppb, benzo(b)fluoranthene as high as 16,000 ppb, benzo(g,h,i)perylene as high as 9,200 ppb, benzo(k)fluoranthene as high as 13,000 ppb, chrysene as high as 56,000 ppb, dibenz(a,h)anthracene as high as 2,300 ppb, fluoranthene as high as 140,000 ppb, fluorene as high as 68,000 ppb, indeno(1,2,3-cd)pyrene as high as 9,000 ppb, naphthalene as high as 2,800,000 ppb, phenanthrene as high as 270,000 ppb, pyrene as high as 120,000 ppb, alpha chlordane as high as 4,900 ppb, total chlordane as high as 49,000 ppb, gamma chlordane as high as 5,900 ppb. Surface liquids also included several PCBs include aroclor 1242 as high as 240,000 ppb, aroclor 1254 as high as 380,000 ppb, and aroclor 1260 as high as 190,000 ppb.

### **III. THREATS TO PUBLIC HEALTH, WELFARE, OR THE ENVIRONMENT, AND STATUTORY AND REGULATORY AUTHORITIES**

The conditions at the U.S. Scrap Site present an imminent and substantial threat to public health, welfare, and the environment and meet the criteria for a removal action provided for in the National Contingency Plan (NCP), 40 CFR § 300.415, paragraph (b)(2), specifically:

- a. Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants;**

The U.S. Scrap Site is located in the City of Chicago. The Site is physically adjacent to the MWRD of Greater Chicago's wastewater treatment plant. Access to the site property is currently uncontrolled. A security fence surrounds the facility. However some evidence of past trespassing was visible at the former incinerator building at the time of the site assessment. Free standing liquids and contaminated surface soils containing high levels of PCB, chlorinated solvents and metals pose dermal exposure, ingestion and inhalation risks to Site trespassers.

Soil sampling results indicate the presence of hazardous substances at surface to subsurface soils and surface water at the site. START noticed dead plants and discolored plants at several areas along the swale or draining ditch lying along property line between the Site and MWRD. During the site assessment insects, birds, ticks and mosquitoes were observed at the site. These animals can potentially serve as carriers for contaminants and result in potential exposure to the nearby human population.

Soil borings collected from the northwest side of Drying Bed No.1 of MWRD near the Site boundary and the swale were found to be heavily impacted with several VOCs, SVOCs, PAHs, PCBs and pesticides. The water from the swale is suspected to have leached into the MWRD property and contaminated the subsurface soil near Drying Bed No.1. This contaminated soil can potentially result in contaminating the sludge that may be dried in the drying beds. Personnel conducting various operations near the drying beds could be exposed to the hazardous substances. If the dried sludge is used by farmers, landscapers or citizens as a fertilizer, then plants, animals and human population can potentially be exposed to the hazardous substances originated from the Site.

The nature of hazardous substances and their potential exposure-related health effects are discussed below. Inhalation of benzene, the most prevalent on-site contaminant detected, can cause drowsiness, dizziness, and unconsciousness. Long-term benzene exposure affects bone marrow and can cause anemia and leukemia. The Department of Health and Human Services (DHHS) has determined that benzene is a known carcinogen. Long-term exposure to high levels of benzene in the air can cause leukemia and cancer of blood-forming organs. Drinking or breathing high levels of TCE, which was also detected on site, may cause nervous system effects, liver and lung damage, abnormal heartbeat, coma, and possibly death. Breathing small amounts may cause headaches, lung irritation, dizziness, poor coordination, and difficulty concentrating. Dermal contact with TCE for short periods may cause skin rashes, headaches, lung irritation, dizziness, poor coordination, and difficulty concentrating. Exposure to very high concentrations of tetrachloroethylene can cause dizziness, headaches, sleepiness, confusion, nausea, difficulty in speaking and walking, unconsciousness, and death. The DHHS has determined that tetrachloroethylene may reasonably be anticipated to be a carcinogen. Tetrachloroethylene has been shown to

cause liver tumors in mice and kidney tumors in male rats. Exposure to chlordane happens mostly from eating contaminated foods and milk, or skin contact with contaminated soil. At high levels, they can cause damage to the human nervous system. Lead can be inhaled in workplace air or dust ingested in contaminated foods, and imbibed through contaminated water. Lead can damage the nervous system, kidneys, and reproductive system. Exposure to high levels can result in neurological effects and brittle hair and deformed nails. Exposure to PCBs can cause irritated eyes, chloracne, liver damage and reproductive effects. The PCBs are potent liver toxins that can be absorbed through the skin in hazardous amounts without immediately discernible pain or discomfort. Where liver damage is extensive, the patient may become comatose and die. The higher the chlorine content of the biphenyl compound, the more probable it is toxic. Aroclor 1254 and Aroclor 1260 present in all soil samples at high levels have high chlorine content and extremely toxic. The PCBs are considered a potential occupational carcinogen.

In addition, MWRD sampled liquids that were coming from the U.S. Scrap Site and collecting in trenches that MWRD was installing on their property during installation of a new drainage system. Based on MWRD sample results, construction workers could be exposed to VOCS, SVOCS, PCBs and Arsenic at levels exceeding the Illinois EPA TACO Tier 1 values.

**b. Hazardous substances or pollutants or contaminants in soils largely at or near the surface that may migrate or pose a threat of release;**

Analytical results of all five soil samples and one duplicate sample exceeded the maximum concentration of 49 parts per million (ppm) PCBs allowed for non-TSCA regulated landfill disposal, as described in 40 CFR Section 761.60 (a) (3). Total PCBs for samples S-1, S-2, S-3, S-4 and S-6 were between 50 to 500 ppm. Total PCBs for sample S-5 were 7,980 ppm. Analytical results for S-1, S-4, S-5 and duplicate S-6 exceeded 150 ppm for chlordane. The underlying hazardous constituent (UHC), such as chlordane for land disposal restriction is 0.26 mg/kg. The S-5 sample was collected from 3 to 4 feet below ground surface (bgs). Since S-5 sample was not from the surface, pesticides could have possibly come from recycling and dumping operations and placing the material into a pit.

In addition, analytical results of four soil samples exceeded the TCLP concentrations of one or more constituents listed in 40 CFR Part 261.24 Table 1, indicating hazardous waste characteristics. Results for samples S-1, S-2, S-3 and S-5 exceeded TCLP regulatory limits for benzene. Analytical results for S-5 exceeded TCLP regulatory limits for tetrachloroethene, cadmium and lead. Analytical results for S-1 and S-5 exceeded TCLP regulatory limits for TCE. These results indicate high potential for migration of hazardous substances present at surface or subsurface soil at the Site.

**c. Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released;**

Heavy precipitation may cause overland transportation of PCB contaminated soil to the MWRD property.

**d. Threat of fire or explosion;**

The threat of fire or explosion exists at the Site. U.S. EPA has already responded to a landfill fire at the Site on August 16, 1985. According to a September, 1986 OSC Report that was generated from this response, there were 300-400 drums including shock-sensitive ethers reportedly buried at the site; however these drums were never found. According to the OSC Report, threats from these drums included fire/explosion of the shock-sensitive ether waste.

**e. The availability of other appropriate federal or state response mechanisms to respond to the release;**

The Illinois EPA has referred this Site to U.S. EPA due to lack of adequate funding to address the Site. The City of Chicago's MWRD of Greater Chicago has also requested U.S. EPA's assistance to address the Site due to similar City funding issues.

**IV. ENDANGERMENT DETERMINATION**

Given the Site conditions, the nature of the confirmed hazardous substances, and the potential exposure pathways described in Sections II and III above, actual or threatened releases of hazardous substances from this Site, if not addressed by implementing the response actions selected in this Action Memorandum, present an imminent and substantial endangerment to public health, or welfare, or the environment.

**V. PROPOSED ACTIONS AND ESTIMATED COSTS**

The OSC proposes the following actions to mitigate threats posed by the presence of hazardous substances at the U.S. Scrap Site:

- 1) Repair of security fence, as necessary, to deter public use.
- 2) Installation of sheet piling along the eastern and southern borders of the Site to minimize off-site migration of contaminated liquids.
- 3) Installation of interceptor trenches along the eastern and southern borders of the Site to collect liquids which pool at or near the surface.

- 4) Removal and disposal of liquids collected from the trenches which exhibit characteristics of hazardous waste, as defined in 40 CFR 261.24, or TSCA 767.
- 5) Conduct additional characterization and extent of contamination sampling and analysis, as needed, to determine the potential for off-site impacts from the wastes at the Site.
- 6) Removal and disposal of PCB, SVOC, metals and chlorinated-solvent contaminated soils which exceed regulatory levels for hazardous waste, as necessary.

The removal action will be conducted in a manner not inconsistent with the NCP. The OSC has established provisions for post-removal Site control consistent with the provisions of Section 300.415(l) of the NCP.

The activities described in this memorandum will require 70 working days to complete.

The detailed cleanup contractor cost is presented in Attachment 1 and estimated project costs are summarized in Attachment 4.

#### **REMOVAL PROJECT CEILING ESTIMATE**

<i>Regional Removal Allowance Costs:</i>	<i>Total:</i>
Total Cleanup Contractor Costs: (This cost category includes estimates for ERRS and subcontractors. Includes a 10% contingency)	\$1,730,241
Total START, including multiplier costs:	\$87,545
Extramural Subtotal:	\$1,817,786
Extramural Contingency (10%)	\$181,755
<b>TOTAL REMOVAL PROJECT CEILING:</b>	<b>\$1,999,564</b>

The response actions described in this memorandum directly address the actual or threatened release at the U.S. Scrap Site of a hazardous substance, or of a pollutant, or of a contaminant which may pose an imminent and substantial endangerment to public health or welfare or to the environment. These response actions do not impose



a burden on affected property disproportionate to the extent to which that property contributes to the conditions being addressed.

#### Applicable or Relevant and Appropriate Requirements

All applicable, relevant, and appropriate requirements (ARARs) will be complied with to the extent practicable. On August 8, 2007, a letter was sent to Mr. Bruce Everetts at Illinois EPA requesting state ARARs.

All hazardous substances, pollutants or contaminants removed off Site pursuant to this removal action for treatment, storage, and disposal will be treated, stored, or disposed of at a facility in accordance with the U.S. EPA Off-Site Rule, 40 CFR 300.440.

#### **VII. EXPECTED CHANGE IN THE SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN**

Continued risk to public health and the environment will result if no action or delayed action ensues.

#### **VIII. OUTSTANDING POLICY ISSUES**

None.

#### **IX. ENFORCEMENT**

For administrative purposes, information concerning the enforcement strategy for this Site is contained in the Enforcement Confidential Addendum.

The total EPA costs for this removal action based on full-cost accounting practices that will be eligible for cost recovery are estimated to be \$3,142,323.<sup>1</sup>

$$(\$1,999,564 + \$40,000) + (55.15\% \times \$1,999,564) = \$3,142,323$$

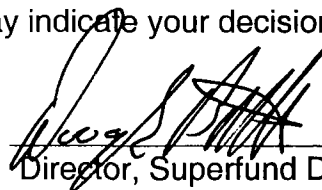
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<sup>1</sup> Direct Costs include direct extramural costs and direct intramural costs. Indirect costs are calculated based on an estimated indirect cost rate expressed as a percentage of site-specific direct costs, consistent with the full cost accounting methodology effective October 2, 2000. These estimates do not include pre-judgment interest, do not take into account other enforcement costs, including Department of Justice costs, and may be adjusted during the course of a removal action. The estimates are for illustrative purposes only and their use is not intended to create any rights for responsible parties. Neither the lack of a total cost estimate nor deviation of actual total costs from this estimate will affect the United States' right to cost recovery.

**X. RECOMMENDATION**

This decision document represents the selected removal action for the U.S. Scrap Site developed in accordance with CERCLA as amended, and is not inconsistent with the NCP. This decision was based upon information now presented in the Administrative Record for the site (Attachment 2). Conditions at the U.S. Scrap Site meet the NCP Section 300.415(b)(2) criteria for a removal and I recommend your approval of the proposed removal action. The total estimated project ceiling, if approved, will be \$1,999,564. Of this, an estimated \$1,730,241 may be used for cleanup contractor costs. You may indicate your decision by signing below:

APPROVE: \_\_\_\_\_

 *for Richard D. Gabel*  
Director, Superfund Division

DATE: \_\_\_\_\_

*9/13/07*

DISAPPROVE: \_\_\_\_\_

DATE: \_\_\_\_\_

Director, Superfund Division

Enforcement Addendum

**Attachments**

1. Detailed Cleanup Contractor Cost Estimate
2. Administrative Record Index
3. Region 5 EJ Analysis
4. Independent Government Cost Estimate

cc: D. Chung, U.S. EPA, 5202-G  
D. Henne, U.S. Department of the Interior, **w/o Enf. Addendum**  
B. Everetts, Illinois EPA, **w/o Enf. Addendum**

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NOT RELEVANT TO THE SELECTION OF THE REMOVAL ACTION

**ENFORCEMENT ADDENDUM**

**U.S. SCRAP SITE  
12301 S. PARK AVENUE  
CHICAGO, ILLINOIS**

**AUGUST 2007**

**(REDACTED 2 PAGES)**

**ENFORCEMENT CONFIDENTIAL**  
**NOT SUBJECT TO DISCOVERY**

**ATTACHMENT 1**  
**DETAILED CLEANUP CONTRACTOR ESTIMATE**  
**U.S. SCRAP SITE**  
**CHICAGO, COOK COUNTY, ILLINOIS**  
**AUGUST 2007**

The estimated cleanup contractor costs necessary to complete the removal action at the U.S. Scrap Site are as follows:

Personnel	\$ 250,786
Equipment	\$ 409,060
Transportation and Disposal	<u>\$ 913,100</u>
<b>TOTAL Cleanup Contractor Costs</b>	<b>\$ 1,572,946</b>



## ATTACHMENT 2

U.S. ENVIRONMENTAL PROTECTION AGENCY  
2<sup>ND</sup> REMOVAL ACTION

ADMINISTRATIVE RECORD  
FOR  
U.S. SCRAP SITE  
CHICAGO, COOK COUNTY, ILLINOIS

ORIGINAL  
AUGUST 21, 2007

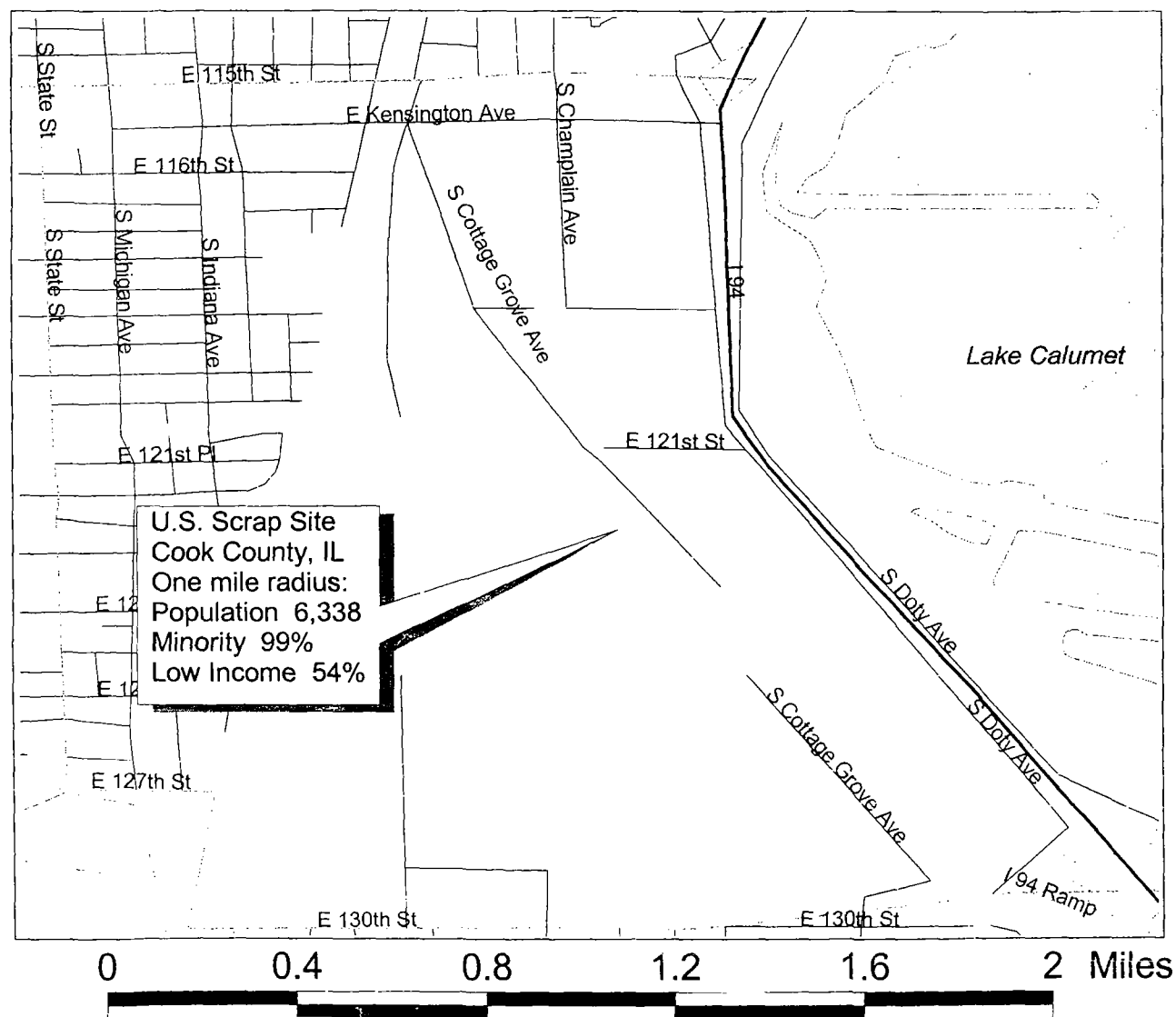
<u>NO.</u>	<u>DATE</u>	<u>AUTHOR</u>	<u>RECIPIENT</u>	<u>TITLE/DESCRIPTION</u>	<u>PAGES</u>
1	08/07/07	STN Environmental	U.S. EPA	Site Assessment Report for the U.S. Scrap Site	117
2	08/08/07	Thomas, C., U.S. EPA	Everetts, B., Illinois EPA	Letter re: U.S. EPA's Request that Illinois EPA Identify any ARARs for the U.S. Scrap Site	1
3	00/00/00	Thomas, C., U.S. EPA	Karl, R., U.S. EPA	Action Memorandum: Request for Approval of a Time-Critical Removal Action at the Former U.S. Scrap Site ( <b>PENDING</b> )	

**ATTACHMENT 3**

**REGION 5 EJ ANALYSIS  
U.S. SCRAP SITE  
CHICAGO, COOK COUNTY, ILLINOIS  
AUGUST 2007**

# Region 5 Superfund EJ Analysis

U.S. Scrap Site Chicago, IL



State of Illinois averages:

Minority: 32%

Low Income: 27%

U.S. EPA Region 5  
Environmental Justice Case Criteria  
for State of Illinois

Minority: 64% or greater

Low Income: 54% or greater

Date of Map: 7/26/07

Source of Map: Census 2000 Database/  
ArcView 3.0



## **ATTACHMENT 4**

### **INDEPENDENT GOVERNMENT COST ESTIMATE**

**U.S. SCRAP SITE  
CHICAGO, COOK COUNTY, ILLINOIS  
AUGUST 2007**

**NOT RELEVANT TO THE SELECTION OF THE REMOVAL ACTION**

**(REDACTED 2 PAGES)**